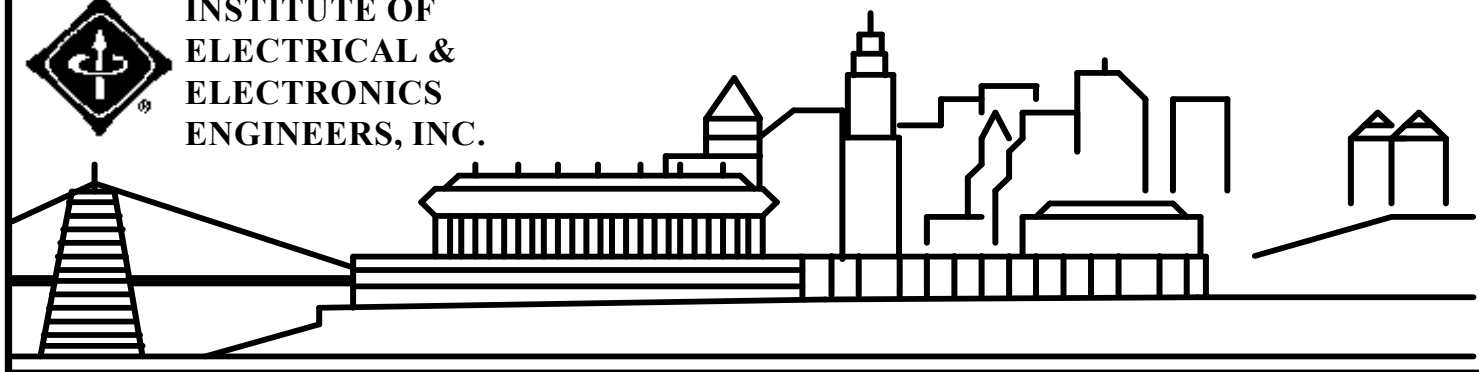




INSTITUTE OF
ELECTRICAL &
ELECTRONICS
ENGINEERS, INC.



NOVEMBER/DECEMBER 1997

IEEE CINCINNATI SECTION NEWSLETTER

HAPPY HOLIDAYS!!

Recognizing the activities surrounding the holiday season and valuing the opportunity for families to enjoy the festivities together, your Executive Committee has decided to skip the technical meeting that normally takes place in early December. We'll see you "next year" with a wealth of interesting programs and activities!

CHAIR'S MESSAGE

by Randy Holt, Section Chair

Greetings, everyone! October's technical meeting on Electric Vehicles was terrific! Mike Beebe presented a wide range of vehicle types that included the "usual" battery-powered type as well as a number of interesting hybrids. He then discussed low-speed vehicles (like motor bikes and "human-powered" EVs) that are being developed. Mr. Beebe showed his expertise by answering a wide variety of questions — our "panel" of about 25 members couldn't stump him!

I haven't heard from many of you regarding what kinds of technical programs you would like next year. Mr. Beebe's company also makes crash test dummies for automotive testing, and he has offered to give us a program on them and the instrumentation required. Did you know that those dummies can cost up to \$30K? Please look for a possible springtime meeting for this. What else would you like to learn about?

As I write this, my hair is getting grayer and my skin is getting more wrinkled. That's true for most of your Executive Committee members. We need new blood! Please contact me if you would like to increase your participation in the IEEE. We would very much like to have women and minorities represented on the committee, and younger members as well. Don't forget that we spring for the meals at the Executive Committee meetings! One is coming up on November 6 — can you come? PLEASE CALL ME!!!

What about a Visual Basic workshop sometime next year? I've received one e-mail message expressing interest. Is this something you would like? CALL ME!!!

I hope to see you soon at one of our meetings. Come and see some great presentations and meet some other really talented members.

The Personal Computer - Part 2

by Dick Reiman, Historian

Digital Equipment Corporation introduced the PDP-8 minicomputer in 1963 for \$18,000. This meant that customers who dreamed of owning their own computer could afford one, and could assign many of their

computational chores to the small and efficient PDP-8. Scientists ordered it for their labs, engineers for their offices, and the Navy for their submarines. In refineries, the PDP-8 controlled the flow of chemicals in factories, it operated machine tools, in warehouses it kept track of inventories, and the banks installed them in their branches to handle transactions that could then be reported to the main office on a daily basis. The applications seemed endless, and the sale of the PDP-8 increased ninefold between 1965 and 1970. ARD's investment of \$70,000 of venture capital became worth \$228.6 million. Digital, under Kenneth Olsen's management shunned acquisitions and mergers and focused on business, staying out of community affairs, and Olsen proved to be a superb manager. Still operating out of their former woolen mill office in Maynard, Massachusetts, Digital continued to grow and in 1977, introduced a new computer, the VAX-11/780, 32 bit minicomputer which proved to be popular and versatile. By 1983, Digital became a large computer manufacturer with 78,000 employees and \$4.3 billion in sales.

Following Digital's success with the PDP-8, dozens of companies entered the minicomputer field, and by 1971, at least seventy five were making minicomputers, although the largest. IBM, Sperry, and Burroughs did not.

Fairchild Camera and Instrument bought out Fairchild Semiconductor, giving Robert Noyce, Jean Hoerni and six other founders \$250,000 in company stock. In 1961, Hoerni and three other founders resigned from Fairchild and established Amelco (later Teledyne Semiconductor). Other lower level followed suit, and about fifty integrated circuit {IC} companies in Silicon Valley have their roots in Fairchild.

Noyce, General Manager of Fairchild, and Gordon Moore, a mild-mannered physicist who was one of Fairchild's founders also resigned to establish Intel (acronym for integrated circuits) in 1968. They advertised that they were specializing in memory chips and supporting capital poured in. Noyce and Moore put up \$250,000 and venture capitalist Arthur Rock raised \$2.5 million. Intel started in a small building in Santa Clara, and devoted its first two years to developing more sophisticated memories.

In 1970, advanced RAMs held sixty-four bits, but were insufficient to replace magnetic cores. First Fairchild, then Intel introduced a 256-bit RAM, and these began to replace magnetic cores. By the end of 1970, Intel had created the 1K RAM and now 1,024 bits of information could be held on a single chip. In 1971, Intel had \$9 million in sales and about 500 employees, only to triple this in three years. In 1971, Intel introduced a revolutionary new chip, the microprocessor. Like many of these technological innovations, the importance of this chip was grossly underestimated. It became the "universal motor" of mechanical control.

A MESSAGE FROM YOUR PACE CHAIRMAN

by Bill Lohner, PACE Chairman

"A Network of Professional Activities for Engineers"

I would like to report that our group to encourage technical and scientific education for high school students had its first meeting. Our group consists of three retired engineers, who are active in consulting work, county development groups and community activities. The other two younger members are employed with local companies and are active in professional and community activities.

We agreed to come up with a goal or mission statement. Our goal would be to encourage high school students to opt for technical and scientific careers. (With the present high school educational requirements and schedules this is easier said than done. More on this in a future message.) Our group initially decided to investigate two areas. These were: (1) Obtain information on high school counselor activities and what their duties are. (2) Find out if any other societies in the ESC are doing anything to further technical studies among high school students.

Assignments were made to investigate the following:

1. Contact high school counselors and find out their duties.

2. Find out what Hamilton County is doing through their counselors to further technical education.
3. Obtain information on what tools are available from the IEEE to encourage technical and scientific careers.
4. See what is available on the Internet.

Below is a quote from " Instant News Services " concerning technology workers.

"The United States could face a shortage of information technology workers that would damage U.S. competitiveness and economic growth, a study released by the Commerce Department says.

The study by the agency's Office of Technology Policy found job growth in high technology fields now exceeds the supply of workers, and that fast-growing companies are finding it difficult to staff their operations. If the trend continues, the consequences could be severe, the study said. "Since information technologies affect every sector and industry ... severe shortages of workers who can apply and use information technologies could undermine U.S. innovation, productivity, and competitiveness in the global market," said Commerce Secretary William Daley."

Bill Lohner
PACE Chairman
(513) - 385 - 7268

IEEE NEWS CALL FOR ACCREDITATION EVALUATORS

The IEEE Educational Activities Board is seeking engineering professionals from industrial, government and academic sectors to serve as program evaluators who will assist in accrediting engineering and engineering technology programs at U.S. colleges. Program evaluations take place in the fall, each generally running two to three days.

Becoming involved in accreditation provides Industry with the opportunity to maintain high-quality educational standards of engineering programs and develop awareness of current educational methods and practices. With the help of the evaluators, the programs will produce proficient graduates who can meet the demands of the engineering industry. Identifying young professionals early on, can help in the recruitment processes.

Being a program evaluator brings personal benefits as well. Program evaluators can expand their networks of technically vital professionals, develop decision making and critical thinking skills, and improve their process management techniques.

Applicants who are selected as program evaluators attend a one-day training session facilitated by the IEEE. The session explains in detail the IEEE/ABET accreditation process. The Accreditation Board for Engineering and Technology (ABET) is a federation of 28 professional and technical engineering societies representing over 1.8 million practicing engineers. The IEEE is ABET's largest member. ABET is recognized by the U.S. Department of Education as having exclusive jurisdiction for accreditation of engineering, engineering technology, and engineering-related education in the United States.

Nomination packages are available from: Accreditation Administrator, IEEE Educational Activities, 445 Hoes Lane, Piscataway, NJ, USA 08855-1331; telephone 1-732 562-5484; e-mail "accreditation@ieee.org". Complete information packages, applications included, are available on the World Wide Web and as e-mail auto-retrievable files. The deadline for submissions is 31 Oct.

Those individuals who are interested in becoming evaluators can access information on the WWW at "http://www.ieee.org/eab/accredit.html". E-mail auto-retrievable files can be obtained by sending a no-text e-mail message to "info.eab.engtech.app@ieee.org" (engineering technology program evaluator application) and info.eab.electeng.app@ieee.org for electrical engineering.

“EE TIMES” EDITOR LAUDS CHANGES UNDERWAY AT IEEE-USA, CITES NEED TO ADD VALUE

WASHINGTON, Aug. 22, 1997 -- "Exciting things are happening" at IEEE-USA, according to Robert Bellinger, profession editor of ELECTRONIC ENGINEERING TIMES, in an editorial published in the Aug. 18 edition of the paper. Bellinger cited the first-ever IEEE-USA officer elections, the introduction of TODAY'S ENGINEER magazine, and the expansion of the IEEE-USA Professional Activities (formerly PACE) Conference as evidence that the Washington-based organization is becoming more entrepreneurial and responsive to professional concerns. He concludes: "Engineers are bottom-line, cut-to-the-chase professionals. IEEE-USA has to 'show them the worth.'"

For more information on the IEEE-USA elections, see Web URL <<http://www.ieee.org/usab/ELECTION/>>.

For an advance look at TODAY'S ENGINEER, visit the quarterly magazine's new Web site at URL <<http://www.ieee.org/usab/TODAYS-ENGINEER>>.

For PACE information, see Web URL <<http://www.ieee.org/usab/DOCUMENTS/PACE/97pace.html>>.

The full text of Bellinger's "Professional Pipeline" column follows:

"IEEE-USA Asserts Itself" By Bob Bellinger ELECTRONIC ENGINEERING TIMES

Exciting things are happening at IEEE-United States Activities, the American unit of the worldwide technical society that you all know and love.

For years, the IEEE grappled with its split personality of serving as the American engineer's chief voice in Washington and acting as a technical organization for the rest of the world. It dealt with that by setting up IEEE-USA with its own funding (a \$23.50 assessment in addition to IEEE dues), its own offices and own staff.

Now, under a reorganization, the United States Activities unit is being told: it's time to cut the purse strings. No more hikes in the USA assessment. From here on, you've got to be more entrepreneurial.

And so this year, IEEE-USA is taking its first steps toward a semi-autonomous, not-quite-independent status:

- It's holding its first direct-election for USA president. This person will serve in addition to the IEEE president, who now takes a global, institute-wide focus.

- It's becoming more entrepreneurial. At year's end, IEEE-USA will roll out a much-needed, subscription-based magazine, TODAY'S ENGINEER, that looks at the entire engineer from a professional and personal viewpoint. Sounds like a quarterly "Profession" section, doesn't it?

- It's opening up the PACE Conference to younger engineers and, eventually, to outsiders, too. Chairman Charles Lessard, in this week's "Profession" section story, outlines an ambitious plan for a PACE Conference for all engineers, not just internal IEEE officers.

As encouraging as those developments are, no one is taking them lightly. For IEEE-USA to be effective, it's got to bring in some significant money. The \$23.50 assessment will carry the group for the next few years, but without new money, IEEE-USA could face considerable downsizing.

Contrary to what some members have thought, IEEE-USA's greatest hurdle hasn't been the opposition of other IEEE technical societies, who've opposed USA's professional slant and easy funding. The principal hurdle IEEE-USA faces is apathy, either from its own members or from the two-thirds of the EE TIMES readership who don't belong to the IEEE.

Unseen, unheard from, apathy represents a massive bog through which the future IEEE-USA officers will have to wade forward, one slobby step at a time. TODAY'S ENGINEER is promising; Lessard is breathing fresh air into the "old boys club" of PACE. And an elected president may give USA an independent voice.

Position papers won't cut it. Engineers are bottom-line, cut-to-the-chase professionals. IEEE-USA has to "show them the worth." Or get stuck in the muck.

IEEE-USA ESTABLISHES ENTRY-LEVEL JOB LISTING SERVICE

WASHINGTON, Aug. 1, 1997 -- IEEE-USA has unveiled a new Entry Level Job Listing Service as the newest addition to its Web-based career and employment service for nearly 20,000 IEEE U.S. Student Members. IEEE-USA's Entry Level Employment Assistance home page logged almost 5,000 visits in May 1997 alone.

Previously, entry-level positions were included on IEEE-USA's award-winning National Job Listing Service, but due to demand for new graduates, a file was added specifically for entry-level listings. In addition to the job postings, this service also includes a page of links to companies that are actively recruiting new and recent graduates. It will allow employers and placement firms to list either specific entry-level jobs on an ASCII-format page or include their organizations with a brief summary and a hot link to their Web sites.

"IEEE-USA's job-posting service differs from others in that it taps into a pool of more than 310,000 members of the world's largest technical professional society," states Richard L. Riddle, IEEE-USA Employment Assistance Committee Chair. Information about how to access the Web service is routinely publicized to IEEE members through the society's numerous technical and professional publications.

The Entry-Level Service can be accessed at <www.ieee.org/usab/EMPLOYMENT/info.ieeeusa.jobs.entry.txt>. For a complete list of IEEE-USA's employment efforts and a link to the Entry Level Employment Assistance home page, check out <www.ieee.org/jobs.html>.

Employers interested in placing a link on this page or posting an entry-level position should contact William Anderson at 202-785-0017, ext. 330; 202-785-0835 (fax); or <w.anderson@ieee.org> (e-mail).

IEEE AND OXFORD UNIVERSITY PRESS AGREE ON ENGINEERING AND COMPUTER ENCYCLOPEDIA

PISCATAWAY, NJ, 2 Sept -- The IEEE Press and the Oxford University Press have agreed to collaborate on a comprehensive encyclopedia on electrical and electronics engineering, and computer science, with versions of the work to be offered in both print and electronic media.

Under a special agreement, the Institute of Electrical and Electronics Engineers, Inc., the world's largest technical professional society, and OUP, the world's largest university press, will jointly develop this new technical reference for a broad readership -- from advanced high school and college students to professional and research engineers. "The Encyclopedia of Electrical Engineering and Computer Science" will offer comprehensive coverage of core engineering and computer topics, ranging from the fundamentals of electrical engineering and information theory through circuits, devices and systems to computer hardware and software engineering, with a strong emphasis on applications in all areas of modern technology.

"What may be the most exciting part of this project is that the material we develop for the database can be retrieved and presented in many formats, including a version that will reside on the World Wide Web," said Anthony Ferraro, staff executive, IEEE Publications. "This recognizes that users want flexibility in the way that they can access reference materials.

"This project offers opportunities to meet market needs, said Edward W. Barry, president, Oxford University Press, Inc. "The paper version of the encyclopedia will satisfy the expected ongoing demand for print reference resources. The electronic version will meet the rising demand for digital reference materials in flexible formats."

Tony Hoare and Murray Eden will head the project as editors-in-chief. Hoare, James Martin Professor of Computing, University of Oxford, England, is a widely-known expert in software engineering and computer programming. A former director of the Oxford University Computing Laboratory, he has published extensively and has served on a number of editorial boards including IEEE Transactions in Software Engineering, Computer Programming Languages, and Computer Journal. He is a Fellow of the Royal Society and a Distinguished Fellow of the British Computer Society and has received numerous awards including the ACM Turing Award and the IEEE Computer Pioneer Award.

Eden, former director of the Biomedical Engineering and Instrumentation Program, National Center for Research Resources, National Institutes of Health, is a noted expert in biomedical engineering, information processing and pattern recognition. He has served on the editorial boards of several publications including IEEE Spectrum, Visible Language, and the International Journal of Man-Machine Studies. He also has been editor-in-chief of Information and Control magazine, and associate editor of the International Journal of Technology Assessment in Health Care in Medicine. He is a Fellow of the IEEE, the American Association for the Advancement of Science and the American Institute for Medical and Biological Engineering.

The encyclopedia will contain approximately two million words and as many as 3,500 illustrations. Slated for release on June 30, 2000, information will be kept current through the continual addition of new articles and updates to existing articles. Additional information is available on the world wide web at <http://www.oup-usa.org/acadref/eee.html>.

IEEE-USA SOUNDS ALARM ON ENCRYPTION BILL

In letters sent in July to the chairs of the Senate Judiciary and Commerce, Science and Transportation Committees, IEEE-USA joined with the ACM (formerly Association for Computing Machinery) to urge defeat

of the Secure Public Networks Act (S. 909). According to the letter: "National security and public safety will be weakened by the mandated introduction of constrained or recoverable-key encryption. We also believe that such action will hinder U.S. competitiveness in international markets, establish a dangerous precedent for the future, and endanger cherished civil liberties in the United States and elsewhere in the world."

TORT REFORM ADVANCES

President Clinton on June 18 signed the Volunteer Protection Act of 1997 (Public Law 105-19) into law. The new law clarifies and restricts the potential liability of volunteers who serve on non-profit association boards and committee such as the IEEE. However, it does not address liability issues related to "good Samaritan" situations, such as engineers who act in a personal capacity during an emergency. Congress is also looking at two new bills that would further expand the liability restrictions to include the individuals' organizations. IEEE-USA has supported passage of volunteer protection legislation at the state level for years through the American Tort Reform Association (ATRA).

WHAT IEEE-USA'S TRANSITION YEAR MEANS FOR U.S. MEMBERS

by Daniel Benigni, Chair, IEEE United States Activities Board

The new Bylaws for IEEE-USA will take effect on January 1, 1998, and what is now known as "IEEE United States Activities" (IEEE-USA) will become "IEEE United States of America." What does this change mean to you -- the U.S. members of the IEEE? Is this just a cosmetic change? What will the effects be, and will they benefit you? Why should you care? I will address these important questions over the next few months in a series of articles designed to keep you up-to-date on the actual transition and on my priorities for this year.

The new Bylaws were written to: (1) make USAB a more autonomous, self-governing IEEE entity; and (2) end the practice of the VP of Professional Activities automatically assuming the role of USAB Chair -- some basic, but important, objectives.

Although the Bylaws do not take effect until next year, we are preparing now for a new IEEE-USA Board configuration, which includes four new offices to be filled when you, the U.S. members, vote. At our February 1997 Board meeting in San Antonio, USAB endorsed the candidates nominated for all positions. There are two candidates each for President, President-Elect, Member-at-large for a one-year term, and Member-at-large for a two-year term. [We also have a petition process if any of you wish to run for any of these positions.] In subsequent years, the election will only be for President-Elect and one Member-at-large (the other candidates are being elected this year only, as it is a transitional time).

The real historical significance is that for the very first time, you, and not the IEEE Assembly, will decide who is going to lead IEEE-USA. The person you choose will not have the separate responsibility as Vice President of Professional Activities -- that title and position will no longer exist on January 1, 1998.

This is your opportunity to make your IEEE vote count as never before, since the first few Presidents of IEEE-USA that you elect will set the tone for the future of the organization. Pay close attention to their campaigns, to their ideas for the future, and to their commitment to positive change. What they want to accomplish will be the mandate you give to whomever wins. To me this is a most exciting new benefit for U.S. members. Another milestone is that these changes will be taking place in 1998, exactly 25 years after USAB's founding.

The title of IEEE-USA President may seem confusing to some, and that's understandable. The writers of the new Bylaws and the USAB Board felt strongly that the title is of utmost importance. The President of IEEE-USA will now unequivocally speak only for IEEE members in the United States. When that person speaks to Congress, to the White House, to the media, or to industry, he or she will be speaking for you more directly than ever before.

When that person says 'I represent 220,000 IEEE members,' there will be no confusion as to who those members are. The IEEE President will still represent the global/transnational IEEE, and the two should not be confused.

The Member-at-large (MAL) positions represent another new benefit to U.S. members. The MALs are representatives of ALL of the IEEE's U.S. members. They do not represent a particular geographic area or technical specialty. This allows the MAL to be unencumbered by not having to respond to the will of a particular constituency. The MAL is, in effect, the eyes, ears, and voice of all U.S. members. The MAL has no formal portfolio of duties assigned by the new Bylaws, is 'at-large', and able to participate in specific IEEE-USA activities of interest to the MAL (with the concurrence of the cognizant IEEE-USA officers).

But what about the other leaders, the five Vice Presidents (VPs) and the Secretary/Treasurer (S/T) whom our Assembly elects? Who are they and what will they do?

The five VPs will serve on the IEEE-USA Board and provide volunteer leadership for Career Activities, Member Activities, Technology Policy Activities, Professional Activities, and Operations. Four of these positions parallel the current Council Chairs and PACE Network Chair, while the fifth VP is entirely new. Operations will cover across-the-board activities, such as conference coordination, publication coordination, financial and strategic planning, and new business opportunities. However, we have only just started to discuss how much we should change the rest of the organization to take full advantage of these new positions.

Just what is this Assembly? It is NOT the IEEE Assembly, but is patterned after it. After this transition year, the IEEE-USA Assembly will consist of the 11 directly-elected members of the IEEE-USA Board, including the three Presidents (Past, Present and Elect), the Region 1-6 Directors, and the two Members-at-large. However, the new Bylaws did not specify an Assembly for this transition year. We considered a number of options, but your Board decided at its last meeting to have an Assembly for 1997 that consists of the Chair and Past Chair of USAB, and the Region 1-6 directors. This Assembly will meet at the end of the year to determine who will fill the five VP and S/T positions.

Why should you care what this Assembly does? Although you do not directly elect the volunteers who will fill the VP and the S/T positions, they are important to you for several reasons. First, by definition, this Assembly meets in your place and represents you, the member, when it's not possible to bring all members together in one place. Second, the VPs and the S/T will become new volunteer leaders on the IEEE-USA Board for the following year, and represent your interests on the Board. Third, if you or any other qualified members are interested in any of these positions, the N&A committee needs to hear from you now. Finally, there is a petition process for these Assembly-elected positions to allow for candidates other than those USAB's Nominations and Appointments Committee (N&A) nominates.

Because it is a transition year, the IEEE-USA Board must also approve, at the last Board meeting of the year, candidates for election in 1998 for the positions of President-elect of IEEE-USA 1999, and the Member-at-Large 1999-2000. Again, the N&A committee will supply lists of qualified candidates for these positions to the IEEE-USA Board, who will then select the Board- approved candidates for next year's election process. There is a petition process for other candidates for these positions as well. Please let the N&A know if you are willing to serve, or know other qualified candidates whom the Committee should consider.

In my next article, I will describe some of the priorities, other than transition activities, that have kept me hopping this year, which is now almost over. I would appreciate hearing from you through the IEEE-USA Office at 202-785-0017, or by e-mail at d.benigni@ieee.org.

LEARNING NEVER GETS OLD!!!!

Announcing An Exciting Video Series To Enhance Technology Education & Help Promote Engineering And Technology In Your Local Schools

It is important to foster students' interests in engineering and technology starting at an early age. And who better to undertake this mission, than an engineering professional who interacts with technology on daily basis. The teaching of science and technology often presents a difficult challenge because making abstract, often complex concepts easy to understand and interesting requires creativity and imagination. Students prefer learning that is interactive and relates to everyday lives.

Now, there is an excellent way to cultivate students' interests in engineering and technology. The IEEE Educational Activities is making available an exciting video series serving as an educational resource that can help engineers introduce technological concepts in a manner targeted towards pre-college students.

With this video series, IEEE members can help promote engineering and technology in the following ways:

- Sections can purchase the tapes to either loan or contribute to local schools.
- Individual section members can contact local schools and encourage them to purchase the tapes.

The IEEE, in conjunction with the Institution of Electrical Engineers (IEE), United Kingdom, sponsors this video series, which consists of three tapes and interactive, reproducible workbooks. Grouped under the title The Faraday's Lecture Series, each video is a top-quality, PBS-type broadcast that discusses facets of electromagnetism based on findings and discoveries of Michael Faraday, a 19th century British scientist and inventor. He influenced 20th century inventions such as personal stereos and cellular phones, laying the groundwork for many 20th century inventors including Thomas Edison.

These video tapes are direct recordings of the Faraday lecture -- an annual, simultaneous broadcast from the UK to schools in North America. They are formatted as lively programs that combine background, demonstrations, experiments and easily understood explanations of cutting-edge technology. According to Prof. Joseph Dumas of the University of Tennessee at Chattanooga, the tapes increase young people's interest in engineering and technology. "These tapes inform youngsters about careers in math and science-related fields," he mentioned. Wayne Day, a teacher from Diamond High School in Anchorage, Alaska said that the tapes helped him enhance his Electronic Communications curriculum, and brought technology to life for many students.

The three tapes in this series are:

- "But, What's The Use Of It, Mr. Faraday?" (1997) discusses how engineers use electromagnetic effects discovered by Faraday, in very diverse applications such as debit and credit cards, batteries and personal stereos.
- "From A to B, Without C: The English Channel Tunnel, (1996) focuses on the English channel that could not have been built without Faraday's 19th century discoveries.
- "Making Waves: The Magic Of Telecommunications (1995) depicts Faraday's contribution to today's advances in telecommunications.

The tapes can be ordered separately or as a whole set. Single tape costs: \$29.95; the whole set: \$75.00.

To order the packages, use the following product numbers:

- CE 100 -- Making Waves: The Magic of Telecommunications (1995);
- CE 101 -- From A to B, Without C: The English Channel Tunnel (1996);

- CE 102 -- But What's The Use Of It, Mr. Faraday? (1997);
- CE 103 -- The whole series.

The package may be ordered from the IEEE, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331. Make checks payable to IEEE. For single sales, call 1-800-678-IEEE; for company or institutional sales, call 1-800-701-IEEE; or fax 732-981-9667.

Please add the following shipping and handling charges: for orders totaling \$1.00 to \$50.00, add \$4.00; \$50.01 to \$75.00, add \$5.00; \$75.01 to \$100.00, add \$6.00; \$100.01 to \$200.00, add \$8.00; over \$200.00, add \$15.00. Call for overseas Air Freight charges. Credit card orders (MasterCard, Visa, American Express, and Diner's Club) are accepted.

WANTED: IEEE VOLUNTEERS TO HELP WITH FUND-RAISING TRADE SHOW

The ISA-IEEE Conference and Exhibit (formerly the Electronics and Instrumentation Conference and Exhibit) has openings for 3 IEEE Members to serve on its Show Committee. This biennial show provides funding for the local sections of both the IEEE and the International Society for Measurement and Control (formerly the Instrumentation Society of America). The show is currently seeking IEEE members to help with planning, publicity, finance and operations for the show to be held in the Spring of 1999. The ISA-IEEE Conference and Exhibit, which has historically been held at the Cincinnati Convention Center, is the largest regional event of its type in the country and typically draws 2000 - 3000 attendees. If you are interested in learning more, please contact Kevin Sullivan (397-5752) or Orest Melnyk (397-5419)

NEW MEMBERS

The following individuals are new IEEE members who are in our Section:

SCOTT A. ABNEY	SUKHJEET S. SODHI
DAVID D HOLLINGSWORTH	BENJAMIN T. WILSON

The following individuals are existing IEEE members who have moved into the Cincinnati Section:

PAUL A. CAYLOR	WILLIAM L HARMON	MARK D. RUCKER
DARYL E. EVERDING	ELIZABETH L. JOHNSON	WILLIAM P. SUFFA
R. L. FRANTZ	WEI LIN	JAMES T. SUHR
HOWARD D. GARDNER	SANTONU PAL	

We wish to extend our welcome to all of our Section's new members!!!

IEEE 1998 CINCINNATI SECTION BALLOT Election of Officers for Term Beginning 1/1/98 and Ending 12/31/99

MEMBER - AT - LARGE

☐ Laurie Tappel
 ☐ Write - In _____

Please vote for only one candidate for Member-at-Large. Resumes of the candidate can be found below. Please return the ballot by:

JANUARY 1, 1998

Return the complete ballot to:

Cinergy
PO Box 960, Room 516Annex
Cincinnati, Ohio 45201
Attention: J. R. Morrison

Signature: _____

IEEE Member Number: _____

RESUME OF CANDIDATE

MEMBER-AT-LARGE (LAURIE TAPPEL)

Ms. Tappel currently works for Cincinnati Bell Telephone as an Advanced Service Developer, creating custom routing solutions for clients using the AIN (Advanced Intelligent Network) platform. She started at CBT in 1986 and has worked in various departments including Outside Plant and Network Planning. She began her engineering career at Harris Government Systems in Melbourne, Florida where she developed Satellite Modems.

IEEE CONTINUING EDUCATION SURVEY

The IEEE Continuing Education Committee wants to know what you think about the Educational programs provided by the IEEE. To that end, we ask that you fill out and return the survey form below. You may also forward your opinions by email to committee chair Ted Moody, t.moody@ieee.org, or to Peter Wiesner, staff manager for Continuing Education at p.wiesner@ieee.org, or at IEEE, 445 Hoes Lane, P. O. Box 1331, Piscataway, NJ 08855-1331.

1. What do you want and expect from the IEEE in the area of Continuing Education? _____

-
-
2. What specific courses or other programs would you like the IEEE to provide? _____
-
-
3. What method of delivery do you prefer, e.g. printed, email, Internet, CD-ROM, etc? _____
-
-
4. Have you ever used any of the IEEE educational services? Which ones? _____
-
-
5. If you have used or heard of any IEEE educational services, how did you find out about them? What avenues would you suggest the IEEE use to publicize its educational services? _____
-
-
6. Describe your present position in general terms - e.g. student, new graduate, senior engineer, retired, etc. _____
-
-
7. Any other comments or suggestions about how your IEEE Continuing Education Committee can serve you? _____
-
-
-

Dee Scott (call for meeting reservations)

Randy Holt - Chairman

Bob Haas - Vice Chairman

Orest Melnyk - Treasurer

Chris Anderson - Secretary

Ron Harbaugh - Member-At-Large

Eric Wright - Member-At-Large

Jack Beckmeyer - Arrangements Chairman

Bill Lohner - PACE Chairman

Bob Morrison - Editor

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